

AMENDMENTS TO THE CLAIMS

1 (Currently Amended). An implant system comprising
a ferromagnetic material comprising at least two discrete sources of magnetism and a flexible polymer matrix carrying the at least two discrete sources of magnetism in a spaced apart relationship, the polymer matrix allowing flexure between the sources of magnetism, the ferromagnetic material being sized and configured for implanting in a tissue region in a lateral pharyngeal wall along a pharyngeal conduit, and

a source of magnetic force sized and configured for placement to interact with the ferromagnetic material to resist collapse of the tissue region.

2 (Currently Amended). A system according to claim 1 or 40
wherein the source of magnetic force is sized and configured for implantation in a tissue region in one of a pharyngeal conduit, a tongue, a pharyngeal wall, an epiglottis, a vallecula, and a soft palate/uvula.

3 (Currently Amended). A system according to claim 1 or 40
wherein the source of magnetic force interacts by repelling the ferromagnetic material implanted in the ~~lateral~~ pharyngeal wall.

4 (Currently Amended). A system according to claim 1 or 40
wherein the source of magnetic force is sized and configured for implantation in a tissue region external to the pharyngeal conduit.

5 (Currently Amended). A system according to claim 1 or 40
wherein the source of magnetic force is sized and configured for placement external to the pharyngeal conduit.

6 (Original). A system according to claim 5
wherein the source of magnetic force is sized and configured for placement on one of an oral cavity, a neck, a jaw, and a head.

7 (Currently Amended). A system according to claim 1 or 40
wherein the source of magnetic force interacts by attracting the ferromagnetic material implanted in the ~~lateral~~ pharyngeal wall.

8 (Currently Amended). An implant system comprising

a ferromagnetic material comprising at least two discrete sources of magnetism and a flexible polymer matrix carrying the at least two discrete sources of magnetism in a spaced apart relationship, the polymer matrix allowing flexure between the sources of magnetism, the ferromagnetic material being sized and configured for implanting in one of a soft tissue region defining a portion of a pharyngeal conduit, a soft tissue region in a ~~lateral~~ pharyngeal wall, and combinations thereof, and

a source of magnetic force sized and configured for implanting in one of a tongue, an epiglottis, a soft palate/uvula, a vallecula, in another soft tissue region in a ~~lateral~~ pharyngeal wall, in an opposite ~~lateral~~ pharyngeal wall, and combinations thereof, to repel the ferromagnetic material and resist collapse of the soft tissue region.

9 (Currently Amended). A system according to claim 1 or 8 or 40 or 41

wherein the ferromagnetic material is sized and configured for implanting in the tissue region through a tonsil fossa.

10 (Currently Amended). An implant system comprising

a ferromagnetic material comprising at least two discrete sources of magnetism and a flexible polymer matrix carrying the at least two discrete sources of magnetism in a spaced apart relationship, the polymer matrix allowing flexure between the sources of magnetism, the ferromagnetic material being sized and configured for implanting in a tongue, and

a source of magnetic force sized and configured for placement to interact with the ferromagnetic material in the tongue.

11 (Currently Amended). A system according to claim 10 or 42

wherein the ferromagnetic material is tethered to an anchoring structure implanted in the tongue.

12 (Currently Amended). A system according to claim 10 or 42

wherein the ferromagnetic material is coupled to a hyoid bone.

13 (Currently Amended). A system according to claim 10 or 42 or 43 or 44

wherein the ferromagnetic material is implanted in one of a lateral tissue region of the tongue, an anterior tissue region of the tongue, a posterior tissue region of the tongue, and combinations thereof.

14 (Currently Amended). A system according to claim 10 or 42 or 43 or 44
wherein the source of magnetic force is sized and configured for implantation in a tissue
region in one of a pharyngeal wall, a soft palate/uvula, and combinations thereof.

15 (Currently Amended). A system according to claim 10 or 42 or 43 or 44
wherein the source of magnetic force is sized and configured for placement in a tissue
region external to the tongue.

16 (Original). A system according to claim 15
wherein the source of magnetic force is sized and configured for placement on one of an
oral cavity, a neck, a jaw, and a head.

17 (Currently Amended). A system according to claim 10 or 42 or 43 or 44
wherein the source of magnetic force interacts by repelling the ferromagnetic material
implanted in the tongue.

18 (Currently Amended). A system according to claim 10 or 42 or 43 or 44
wherein the source of magnetic force interacts by attracting the ferromagnetic material
implanted in the tongue.

19 (Currently Amended). A system according to claim 1 or 8 or 10 or 40 or 41 or 42
or 43 or 44
wherein the ferromagnetic material includes a soft ferromagnetic material.

20 (Currently Amended). A system according to claim 1 or 8 or 10 or 40 or 41 or 42
or 43 or 44
wherein the ferromagnetic material includes a permanent magnet.

21 (Canceled).

22 (Currently Amended). A system according to claim ~~21~~ 1 or 8 or 10 or 40 or 41 or
42 or 43 or 44

wherein the flexible polymer matrix includes a biocompatible protective material.

23 (Currently Amended). A system according to claim ~~21~~ 1 or 8 or 10 or 40 or 41 or
42 or 43 or 44

wherein the flexible polymer matrix includes a tissue in-growth material.

24 (Currently Amended). A system according to claim ~~24~~ 1 or 8 or 10 or 40 or 41 or 42 or 43 or 44

wherein the flexible polymer matrix includes a mechanical tissue stabilization element.

25 (Currently Amended). A system according to claim 1 or 8 or 10 or 40 or 41 or 42 or 43 or 44

wherein the ferromagnetic material comprises one of a generally horizontal array of ferromagnetic materials implanted in the tissue region, a generally vertical array of ferromagnetic materials implanted in the tissue region, a generally angular array of ferromagnetic materials implanted in the tissue region, and combinations thereof.

26 (Currently Amended). A system according to claim 1 or 8 or 10 or 40 or 41 or 42 or 43 or 44

wherein the source of magnetic force includes one of a permanent magnet and an electromagnet.

27 (Currently Amended). A system according to claim 1 or 8 or 10

wherein the source of magnetic force comprises at least two discrete sources of magnetism, and

further including a flexible polymer matrix carrying the at least two discrete sources of magnetism in a spaced apart relationship, the polymer matrix allowing flexure between the sources of magnetism.

28 (Currently Amended). A system according to claim 1 or 8 or 10 or 40 or 41 or 42 or 43 or 44

wherein the ferromagnetic material is sized and configured for implantation within an implantation sleeve.

29 (Original). A system according to claim 28

wherein the implantation sleeve includes a mechanical tissue stabilization device.

30 (Currently Amended). A method for treating sleep disordered breathing comprising using an implant system defined in claim 1 or 8 or 10 or 40 or 41 or 42 or 43 or 44.

31 (Original). An implant device comprising
at least two discrete sources of magnetism, and

a flexible polymer matrix carrying the at least two discrete sources of magnetism in a spaced apart relationship, the polymer matrix allow flexure between the sources of magnetism.

32 (Original). A device according to claim 31

wherein the sources of magnetism comprise ferromagnetic materials.

33 (Original). A device according to claim 32

wherein the ferromagnetic materials include soft ferromagnetic materials.

34 (Original). A device according to claim 32

wherein the ferromagnetic materials include permanent magnets.

35 (Currently Amended). A device according to claim 31

wherein the at least two discrete sources of magnetism comprise[s] electromagnets.

36 (Original). A device according to claim 31

wherein the flexible polymer matrix includes a biocompatible protective material.

37 (Original). A device according to claim 31

wherein the flexible polymer matrix includes a tissue in-growth material.

38 (Original). A device according to claim 31

wherein the device is sized and configured for implantation in one of a pharyngeal wall, a tongue, a soft palate/uvula, an epiglottis, and a tissue region in a pharyngeal conduit.

39 (Currently Amended). A method [a] of treating sleep disordered breathing comprising using the implant device defined in claim 31.

40 (New). An implant system comprising

a ferromagnetic material sized and configured for implanting in a tissue region in a pharyngeal wall along a pharyngeal conduit, and

a source of magnetic force comprising at least two discrete sources of magnetism and a flexible polymer matrix carrying the at least two discrete sources of magnetism in a spaced apart relationship, the polymer matrix allowing flexure between the sources of magnetism, the source of magnetic force being sized and configured for placement to interact with the ferromagnetic material to resist collapse of the tissue region.

41 (New). An implant system comprising

a ferromagnetic material sized and configured for implanting in one of a soft tissue region defining a portion of a pharyngeal conduit, a soft tissue region in a pharyngeal wall, and combinations thereof, and

a source of magnetic force comprising at least two discrete sources of magnetism and a flexible polymer matrix carrying the at least two discrete sources of magnetism in a spaced apart relationship, the polymer matrix allowing flexure between the sources of magnetism, the source of magnetic force being sized and configured for implanting in one of a tongue, an epiglottis, a soft palate/uvula, a vallecula, in another soft tissue region in a pharyngeal wall, in an opposite pharyngeal wall, and combinations thereof, to repel the ferromagnetic material and resist collapse of the soft tissue region.

42 (New). An implant system comprising

a ferromagnetic material sized and configured for implanting in a tongue, and

a source of magnetic force comprising at least two discrete sources of magnetism and a flexible polymer matrix carrying the at least two discrete sources of magnetism in a spaced apart relationship, the polymer matrix allowing flexure between the sources of magnetism, the source of magnetic force being sized and configured for placement to interact with the ferromagnetic material in the tongue.

43 (New). An implant system comprising

a ferromagnetic material sized and configured for implanting in a tongue, the ferromagnetic material being tethered to an anchoring structure implanted in the tongue, and

a source of magnetic force sized and configured for placement to interact with the ferromagnetic material in the tongue.

44 (New). An implant system comprising

a ferromagnetic material sized and configured for implanting in a tongue, the ferromagnetic material being tethered to an anchoring structure adapted to be coupled to a hyoid bone, and

a source of magnetic force sized and configured for placement to interact with the ferromagnetic material in the tongue.

45 (New). An implant device comprising

at least one source of magnetism having a periphery, and
a flexible polymer matrix including a protective material encapsulating the at least one source of magnetism, the flexible polymer matrix including an edge region extending beyond the periphery of the source of magnetism to allow flexure of the flexible polymer matrix relative to the source of magnetism.

46 (New). A device according to claim 45
wherein the source of magnetism comprises a ferromagnetic material.

47 (New). A device according to claim 46
wherein the ferromagnetic material includes a soft ferromagnetic material.

48 (New). A device according to claim 46
wherein the ferromagnetic material includes a permanent magnet.

49 (New). A device according to claim 45
wherein the source of magnetism comprises an electromagnet.

50 (New). A device according to claim 45
wherein the flexible polymer matrix includes a tissue in-growth material.

51 (New). A device according to claim 45
wherein the device is sized and configured for implantation in one of a pharyngeal wall, a tongue, a soft palate/uvula, an epiglottis, and a tissue region in a pharyngeal conduit.

52 (New). A method a treating sleep disordered breathing comprising using the implant device defined in claim 45.